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BUREAU OF LAND MANAGEMENT

10

FEDERAL HELIUM PROGRAM

11

AMARILLO FIELD OFFICE

12

LISTENING SESSION

13

AMARILLO, TEXAS

14

JANUARY 8, 2001

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2 (On the record at 6:34 p.m.)

3 MODERATOR: Well, I guess we'll go ahead and get started. I usually can speak
4 loud enough for you to hear me, but if not, please wave a flag, or we do have some microphones
5 I can turn on. My name is MODERATOR. I'm the field manager here at the Amarillo Field
6 Office. And our stated purpose for this meeting, it's the first of five meetings that we're intending
7 to hold across the country to get public comments on our helium regulations that we've kicked
8 off. In mid-December we had the helium registered -- the federal registered notice kicking off
9 the helium regulatory process that we're going through. And I believe the comment period goes
10 until March the 31st. Is that correct?

11 RESPONSE: March 26th.

12 MODERATOR: March 26th of 2001. And what I'm planning on doing right now is
13 just giving a little bit of background of what we do here at the Amarillo Field Office, Helium
14 Operations, covering some of the more traditional BLM functions as well as the ones that we've
15 been doing for many years now.

16 Of course, our authorities are based on legislation that was passed back in 1925 and
17 before. More recently, of course, the Helium Act of 1960, which basically kicked off the
18 conservation program. That gave the helium program the authority to purchase crude helium
19 from private crude helium extractors which we put into storage. We'll talk a little bit about the

1 crude helium here in a little bit.

2
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4 More recently, the Helium Privatization Act of 1996, that basically directed us to just
5 cease the refining operations and dispose of all operations, equipment, and property dealing with
6 the refining operations, but continue on the storage program and dispose of our crude helium
7 stockpile in a prescribed way.

8 Also, we have regulations in 43-CFR-16 and 3195. Sixteen are more general
9 regulations that were put together probably in the 60s. I don't know the exact date on that. The
10 part 3195 deals specifically with our in-kind sales. And we'll be discussing those in a little bit
11 more here later on tonight.

12 Again, the Amarillo Field Office, we do more traditional BLM functions, specifically
13 the inspection enforcement of all the oil and gas properties related within the newly designated
14 Amarillo Field Office. And I'll talk a little bit more about it in the next slide. Also, land
15 management, we have, actually, about 12 thousand acres of surface that came along with the
16 helium program that we'll be managing according to BLM guidelines. Those two areas of our
17 operations are really not up for the regulatory arena. Those are more -- would be under the
18 guidance of the current existing BLM regulations. However, the four helium-related functions are
19 those that we're putting our regulations together for. Them being storage and transmission, crude

1 helium sales, resource evaluation and gas analysis, and our helium produced from federal land.

2 First, the more traditional BLM functions, the inspection enforcement. Before October
3 1 of 2000, all of Texas, Oklahoma, and Kansas were covered -- were run out of the Tulsa Field
4 Office. With our office, the Amarillo Field Office, being moved under the Bureau of Land
5 Management three or four years ago, BLM then had an opportunity to run some of their
6 operations out of Amarillo, which was closer to some of the wells in southwest Kansas and the
7 Oklahoma Panhandle.

8 Right now, we have a petroleum engineering technician that is stationed in Amarillo.
9 And he'll start to do the inspections in this area. It was just more of a logistical means of
10 spreading out the workforce to put them closer to where the operations were.

11 Public land management deals primarily with the 12 thousand or so acres that the
12 government owns. The Cross Bar property is northwest of town here. Most of the other
13 government-owned resources are subsurface minerals within the Amarillo Field Office area.
14 Again, in this area, we're not really looking at the regulatory environment, but it was just an
15 opportunity to educate the public and give them a little idea of some of the things that we're doing
16 here in Amarillo.

17 The first of the four helium functions that we do is storage and transmission. We do
18 have a storage field here. Most of you may or may not know, about 15 miles northwest of town,
19 there is a government-owned Cliffside storage field. There's about 4.5 billion cubic feet of

1 privately-owned helium in storage, a little under 30 billion cubic feet of government-owned helium
2 in storage. That's the conservation helium that was purchased in the 60s and early 70s. That's all
3 surrounded by about 200 billion cubic feet of natural gas that surrounds the crude helium
4 stockpile, both government and private.

5 Connected to this field is our crude helium pipeline. It connects both government --
6 well, used to be government -- but some government facilities and private and privately-owned
7 crude helium extraction plants and helium refineries. And these are all connected to a 425 mile
8 pipeline network that terminates here at Cliffside and up here in Bushton, Kansas.

9 The triangles represent private helium refiners, and the blue circles are privately-owned
10 crude helium extractors. Often they'll be situated next to one another because the crude helium
11 producers extract crude helium that the refiners often use. Whatever helium that's not used by
12 the refiner goes into storage, or it can be taken out of storage.

13 Also, some of the things that we're doing out at the storage field is putting in some
14 compression. Here is a picture of the new compressor that, through a partnership with private
15 industry and the BLM, we've installed a privately-owned compressor that will be turned over for
16 us to operate and boost the gas coming out of the field and put into the pipeline to facilitate the
17 redelivery of the crude helium back to private industry.

18 We are looking at sometime down the road putting in a crude helium enrichment unit
19 which will help us manage the field a little bit better. Here's a picture of a cold box at one of the

1 plants that would be similar to the type of equipment that might be put in at Cliffside. That's still
2 in the planning stages, though.

3 One of the things that we would like to get out of these meetings is any suggestions for
4 improving the processes that we currently use for storing the private helium in the storage facility.
5 But, by and large, the storage and transmission part of our operations are run through contracts.
6 And we don't expect a lot of regulatory guides to be developed because we're doing these
7 through our contracts.

8 The next area of main function of our operations are our crude helium sales. We
9 started these with our in-kind sales back in 1998 through our in-kind regulations, the part 3195
10 that I mentioned earlier. These regulations are designed to implement the Helium Privatization
11 Act when it comes to our crude helium stockpile. And they require us to sell to refiners that sell
12 crude refined helium to government contractors and agencies in equivalent amount of crude
13 helium from the reserve. And that's what we are doing now.

14 But it also -- the legislation, it directed us to sell down the stockpile no later than 2005
15 over straight-line basis until 2015. And that's a major part of what these meetings are for is to
16 get your input and thoughts on how would be the best way to do that without affecting the
17 existing markets as they are. This graph shows helium sales -- refined helium sales of U.S.
18 produced helium over the last 15 years. The green is government refined, and then turn to
19 yellow, the in-kind. This blue is privately-supplied refined helium.

1 The third major area is our helium evaluation gas analysis. One of the things we do is
2 we keep up with helium reserves throughout the country and to a lesser extent the world. We
3 are a natural place -- a natural clearinghouse of where we can collect information and aggregate it
4 and put that out. We had -- as part of the Helium Privatization Act, it was required for us to
5 have the National Academy of Sciences study the industry as a whole and the legislation in
6 particular. Some of the recommendations that they came out with were to more rigorously define
7 means of collecting data about the industry. And those are some areas that we'd like some input
8 on. In particular, "Is there a way for the oil and gas industry to include helium in their standard
9 gas analysis process to enable better data collection of helium content of gas fields?" That's one
10 of the questions on your sheet that we passed out.

11 Another one, "What are the best ways for BLM to determine and confirm the location
12 and amounts of helium resources outside the United States?" We have very little leverage outside
13 of the United States for getting good, reliable information. Because what happens outside the
14 United States is more and more having an impact on our operations and production in storage
15 within the United States. So any thoughts that you might have in those areas would be very
16 helpful.

17 Should we put in the regulations a means for collecting helium sales data? Right now,
18 we basically go out and request about every five years that data. And it's done on a voluntary
19 basis. But sometimes the quality and the consistency of the data makes it very hard to come out

1 with a good quality product. Are regulations an answer in getting some kind of good data that
2 we can use to help us provide better information to the industry?

3 The other part of the helium evaluation and gas analysis is our gas analysis function.
4 We have a lab that does gas analysis specifically for helium. But they do a full mass spectrometer
5 analysis for our field survey. That is a database of 20,000-plus gas samples; analyses since 1917
6 to present of helium-bearing and nonhelium-bearing gas formations across the country. We use
7 that database to help us track helium reserves, those that are depleting and nondepleting, as well
8 as doing gas analysis for our storage program itself. The helium coming out of the field and
9 companies along the pipeline, it helps us insure that our equipment is properly measuring gas and
10 functioning correctly.

11 Some of the areas we'd like to look at there, a question we have, "Could members of
12 the oil and gas industry send replicate gas stream samples to the laboratory if requested?" In
13 other words, is there a better way for us to collect gas samples from the industry to insure that
14 we get adequate coverage of the producing formations and those that are newly discovered?
15 We'd like as much input as we can in those areas.

16 Our last major area and probably the one needing the most regulations as far as helping
17 us to be able to do our job is keeping track with the helium produced on federal land. Our group
18 right now determines helium ownership rights as well as collects and audits fee sales and royalties
19 from helium produced on federal lands. The standard BLM oil and gas lease, the Section 8 of

1 that, reserves federally-owned helium to the federal government. It also stipulates that that
2 provision, that Section 8 provision, should be incorporated in any contracts that the producers or
3 pipeline companies might have with subsequent parties.

4 What we find is that that section often is overlooked and not included within those
5 agreements. And the people downstream don't realize that the helium that's produced from those
6 federal leases isn't theirs to produce and sell. And right now that is a very strong weakness in our
7 ability to track that helium and properly recover federal monies for that. And that is something
8 that we wish to address in a couple of different areas. Some of the questions that we'd like to
9 have input on is "Can the process used for federal leaseholds (based on acreage and mineral
10 ownership) be used for secondary units?"

11 "Is it reasonable to allow an eight percent loss of helium from the wellhead to the point
12 of sale before seeking compensation?"

13 "Should we require a separate bond to cover helium production" as compared to the
14 oil and gas bonds?

15 "Is there a way to encourage and enable economic helium production and extraction
16 when oil and gas wells are plugged or targeted for plugging?" These are some of the areas that
17 we'd like your input as much as possible.

18 This next picture shows that not only is the helium industry in this big continent area
19 where we have our storage field and pipeline, but also there are private helium refineries in Utah,

1 Wyoming, and eastern Colorado. And the possibilities are they are spreading because there are
2 helium in natural gas reserves that possibly will be drained in the future. So it's not just in this
3 midcontinent area or what I call the midcontinent area.

4 Quick summary before we get to your time. Again, we do have the traditional BLM
5 function, the I&E function (inspection and enforcement), and our land management activities, as
6 well as the storage and transmission, crude helium sales, evaluation analysis group, and the
7 federal lease lands group. Those are something that -- where we have a name change, when we
8 came under BLM or came under the New Mexico jurisdiction, we changed our name to the
9 Amarillo Field Office. But we always still put the Helium Operations after it because that's mainly
10 what our people know us by. And we'll always be helium, I believe, because of the storage field
11 and the program and keeping up with that helium produced on the federal lands.

12 But at this time, I'd like to encourage those of you to step up and provide any
13 comments that you might wish to. But I recognize probably a lot of you here are interested in
14 hearing what's being said. And if we'd rather, we could do more of a question-and-answer type
15 thing. And I'll be willing to answer your questions where they don't deal with policy. Because,
16 specifically, what we're doing this for is to get your input before we start formulating the policy
17 that deals with these types of things. And so we'll try to do that as best we can. But I'm certainly
18 willing to answer any operational questions or questions of fact that we can based on the
19 information I presented and anything else you might want to know about in this area.

1 This last slide has -- if you don't feel comfortable speaking in front of or saying
2 something that you might not want to say in front of some of your potential competitors, you may
3 certainly send all your formal comments into the e-mail address or carried by hand or mail. If
4 you just want more general information that we don't answer here, you can check out our
5 website or e-mail this address here. And I'll leave this up for the remainder of the session so you
6 can copy it down at your leisure.

7 Any questions or comments? I usually have a guy at our own employee meetings that I
8 can always pick on to get the ball rolling. Because a lot of times, once you get it going, things
9 start happening. So we just need somebody to ask a simple question.

10 COMMENT: What's the status of your compressor now?

11 MODERATOR: My understanding is tomorrow they're expecting to run the 24 hour
12 acceptance test. And assuming that that is passed, it will be turned over for us to operate. So
13 we're getting real close to putting that on-line.

14 Anything else?

15 COMMENT: Where did the eight percent loss number come from? From the
16 wellhead to the point of sale.

17 MODERATOR: That's a suggestion.

18 COMMENT: Is that what it is now?

19 MODERATOR: That's not what we use now. What we have now is based on

1 policies, based on past practice, written up here locally. The whole point of the regulatory
2 process is to get something down that everybody -- not necessarily everybody will agree to, but
3 everybody will have had a chance to speak and comment on and get it down. And then
4 everybody will know without a doubt that's the rule, you know, because it's published.
5 Everybody knows it. It's not just something that we've made up here.

6 COMMENT: You figured out. Right.

7 COMMENT: So along those lines, really, what if you've got a plant that can only
8 recover 60 percent of the helium that makes it to the plant?

9 MODERATOR: Well --

10 COMMENT: What do you --

11 MODERATOR: Repeat that question a little louder.

12 COMMENT: Okay. What if you're hung with a plant that can only recover 60% of
13 the helium that gets delivered to the plant? And that's discounting losses in the field. I mean, I
14 may not be getting 55% of the helium that's produced at the wellhead.

15 MODERATOR: Well, that's a good point. What happens? That might say that the
16 eight percent is not reasonable. Maybe it would say that, based on the technology employed,
17 maybe there should be a range or something, a loss no more than. I mean, that's the point.
18 That's something that you would want to state that that could be a problem. So what's another
19 way of doing it?

1 COMMENT: I think that each individual facility really needs to be looked at. You
2 know, in Kansas, I wouldn't have any problem with eight percent loss at all because it's less than
3 that. But in Texas . . .

4 MODERATOR: So would you say a hard-and-fast standard like that is not --

5 COMMENT: Feasible.

6 MODERATOR: -- feasible in all locations?

7 COMMENT: Right. To me.

8 MODERATOR: What would you suggest being different that might be a little bit more
9 universal? Or is there something that could be done that's a little bit more universal?

10 COMMENT: I'd have to think about it.

11 MODERATOR: Well, sit and think about it. Send your thoughts in. Because
12 everything you say here -- not necessarily -- since nobody's coming up and speaking, just more
13 questions asked, you know, kind of anonymously. But at the same time, all that will be put in a
14 record as well as any comments that you send into any of those locations there. It will become
15 part of the database that we use to develop the regulations.

16
17 COMMENT: I have some answers here to the questions you asked. I can't speak for
18 the oil and gas industry specifically, but I would think that they would certainly analyze the
19 product to see what kind of helium was in that gas stream before they started upgrading it. As

1 far as the BLM sending the helium sample to us for our analysis and report back to you, that
2 would be no problem. Nor would we have a problem sending you a sample of ours either.

3 COMMENT: I just wanted to make a comment or a suggestion that if there is a
4 question thrown out for feedback, if you could provide us with specific reasons why something
5 will or will not work, that will be a lot more helpful than just saying, "That won't work."

6 MODERATOR: Certainly, the more specific you can be in any of your comments, the
7 more it helps us to understand what the problems are and how we might come up with a way to
8 address the issue that we think we have. Or we may find that the issue we think we have is a
9 nonissue, shouldn't be an issue. But the more information that we have, the more thoughts that
10 we have in those areas, it helps educate us, too. I mean, we certainly don't allege that we know
11 all and everything in this area. We know a lot, but we know from our perspective. But you guys
12 have a whole range of experience and issues that we'll never be able to tap into fully. But this is
13 an opportunity to kind of bring that out.

14 And I don't expect a whole lot here. This is kind of our dry run so to speak. It's our
15 first meeting. We have another one this Wednesday down in Houston, next Wednesday in
16 Portland, Oregon, and then the following Tuesday in Denver or Aurora, but it's Denver,
17 Colorado, and that following Thursday in Washington D.C.

18 And I think we've heard we're going to have a potentially good turnout in Houston.
19 And I would say in D.C. we'll probably get a lot of refiners because that's up more in their

1 country. And I think even in Denver we may get a lot of people. So it's an opportunity for you
2 -- you may hear this, and you may think of things after you go. That's why the comment period is
3 open for that longer period of time and gives you several different means of being able to get your
4 thoughts into us. But I guess when it comes down to it, absent of any thoughts from the industry,
5 we'll come up with something. And that's not meant to be a threat.

6 COMMENT: Could you just address what it is you're trying to get to with the eight
7 percent so that maybe in our thinking we could respond with something? I'm sitting here thinking
8 about the plant I operate and the three that I have my gas processed at. And I'm thinking, what
9 can I do to give you something that's useful that doesn't try and substitute for the inherent
10 economics of the business?

11 MODERATOR: Well, I think we want to provide an incentive as much as possible to
12 insure that federally-owned helium that's produced from the wellhead and is being shipped to be
13 recovered, that as much of that is recovered as possible. Certainly there's economics on the
14 producer's standpoint that the more they recover, the more they're going to get their particular
15 piece of the royalty. So there's certainly that interest there. But, at the same time, is there some
16 other means that we can use to kind of help that along and insure that -- you know, maybe it
17 could be seen as a carrot-and-stick approach or not. But is there another way to kind of help
18 add on to that?

19 And again, we have a standard that we use, but it's something that we came up with

1 based on past experience. Is that the proper yardstick to use? Maybe we're leaving something
2 out on the table. And I think we're looking at a little bit tighter spectrum than what we've used.
3 But that's kind of the area we want to talk about or get some comments on.

4 COMMENT: My first comment is general. I'd like to talk about helium conservation.
5 This is how the storage facility came into being. And the first comment I'd like to make is that the
6 time frame that the originators of the storage facility conceived of was much too short. They
7 thought that in the course of 40 years they would fill up the storage reservoir and empty it. And
8 they -- I think, very fortunately, they were wrong in that we are still enjoying the use of that
9 reservoir.

10 It's very difficult for ordinary folks to have even a 40 year time line. It's difficult for the
11 United States government. Congress doesn't, after awhile, like programs that don't go anywhere
12 for 10, 20, 30 years. But in this particular case, I think that those of us who have looked at the
13 world sources of helium and the emergence of helium markets certainly are convinced that this is
14 a problem that requires a very, very long view.

15 It's conceivable that some significant supply of helium can be made available to people
16 in the United States through the end of this century. It's not possible for any of us to have vision
17 beyond that. But at least we can see very dimly the possibility, not of sustaining the present
18 market, not of any kind of growth in the market, but at least the maintenance of some substantial
19 portion of the helium use that people in the United States have today through the end of the

1 century. That won't be achieved unless both the private sector and the public sector look upon
2 this as a distinct goal to continue to have a helium industry through the end of this century.

3 The private sector has pressures on it that compel it to turn its capital over rather
4 quickly. And its vision is fairly short. But the people of the United States have a 200 year
5 history behind us. We expect to be here a hundred years from now. We expect our children --
6 I certainly don't expect to be here 200 years from now, but I expect my children and
7 grandchildren and their children will be here. And I wish them to be able to enjoy the same kind
8 of, not necessarily the identical kind, but a similar kind of lifestyle to which we mostly have
9 become accustomed. And that's going to include helium.

10 One of the things about helium that has been absolutely true in the past 40 years, 50
11 years, is that the uses that exist today did not exist then. We're hardly using any helium at all for
12 blimps and major lifting devices, which was essentially the only use in 1950. All the other things
13 that we've done have come as the result of major new discoveries in science and technology.
14 And there's no evidence at all that this is going to stop suddenly and come to a halt. We can
15 expect 50 years from now to be using helium in ways that you and I can't even imagine because
16 we just don't know about such things.

17 So it seems to me that one of the things we need to think about here is that the
18 presence of the United States government in the helium business is important. It should continue,
19 and it should have a very long time line expectation. In dealing with the conservation storage

1 program, Congress, representing the kind of thinking that we mostly have about these things,
2 wanted to get rid of this program because it didn't seem to be doing very much. And they set a
3 certain time line. It is conceivable that one can utilize that time line; that is to say, the time
4 between 2005 and 2015 to accomplish the purposes that the Congress set in the law. But, in
5 point of fact, the storage program is going to continue to have a beneficial effect for as long as we
6 can keep helium in that storage dome. And so I think that in any other respect where we set
7 these policy guidelines, we ought to be thinking as much as possible in as long a vision as we can.
8 We're only human, we're not gods, we can't foretell the future. But insofar as we have any
9 vision, we should let it be long-range.

10 The second thing I'd like to talk about a little bit is the program in which the private
11 industry stores helium with the storage program. I was involved back in the mid-70s with setting
12 up the terms of that proposal. And at the time, I was told by various people, "This isn't really
13 very important because none of the private companies is going to want to put helium in the
14 ground and save it."

15 And since 1975, approximately two billion -- approximately 20 billion cubic feet of
16 helium has been entered into the program by private industry. Most of that, 15 out of the 20, has
17 already come back to refineries and been used. But during that time, we established that the
18 storage program had a secondary value which was very, very large.

19 The primary value of the storage program was that the use of gas from the Hugoton

1 field for its fuel value was proceeding at a very rapid pace. But demand for the helium that was
2 associated with that gas was presently not very large. It was less than half-a-billion feet a year
3 back in 1960 when they started the program. And there was something like nine million cubic
4 feet of helium in the gas coming out of the Hugoton field every year. So that the current use was
5 an extremely small part of the total available.

6 So the primary purpose of the storage program was to put the helium into storage
7 rather than seeing it wasted, and save it for a future day when demand for helium would still be
8 there, but the fuel gas available from the Hugoton field would be gone. And we know that that
9 day is coming. The Hugoton field is depleting rather rapidly and probably does not have a useful
10 life more than 15, 20 years. So the primary purpose is clear to understand.

11 The secondary purpose that developed since 1975 has been, in my estimation, of
12 extreme importance and that is this: A helium extraction plant is quite large because it has to
13 process all of the gas. The gas from Hugoton has only half a percent of helium, which means that
14 you've got to process 200 units of gas to get one unit of helium. A helium refinery, on the other
15 hand, is quite small in comparison because it's dealing with something that's already over 50
16 percent helium and just raising that up to purity and then getting it ready to be transported to
17 wherever it wants to go. And therefore, it's quite important in the economics to run an extraction
18 plant at as high a level of operation as you can, limited only by the gas that's flowing to the plant.

19 The refinery and transport operations have to be geared to demand. If nobody wants

1 the helium today, we can't ship it. You know, there's no place to ship it to if there isn't a
2 customer ready to take it. So there is a discontinuity between the extraction of helium from
3 natural gas and its refining and transport to market. And the storage program intervenes between
4 those two to allow the extraction plant to operate at its normal rate and the refinery to operate at
5 its normal rate, with gas going into storage when there's an excess and coming out of storage
6 when there's a need. And that has been very clearly demonstrated over the course of the last 25
7 years, with many times helium going into storage and the storage building up, and then for a
8 period of time coming out of storage and supporting the market.

9 In 1982, something like 70 percent of all the helium that went to users came out of
10 storage, because for various reasons, some of them business, some of them otherwise, there was
11 very little extraction going on in 1982. And in the year 2000, something similar happened. With
12 things occurring that limited production from a lot of plants, lots of helium came out of storage to
13 support user.

14 The helium industry -- I've been a member of the compressed and liquefied gases
15 industry for 50 years, and the end products of that industry are oxygen, nitrogen, hydrogen,
16 things that get shipped in compressed gas or liquefied gas form. And I'm very familiar with that
17 industry. And it is an industry centered around local production units.

18 Helium is a very strange product in that industry. Helium is a world market. A third of
19 the helium produced in the United States is shipped outside the United States. There are only a

1 handful of locations throughout the world where helium is produced. And nevertheless, it's used
2 all over the world. It's even used at the South Pole. I had personal experiences taking helium
3 down to the South Pole.

4 The thing about that is that you've got a product that's a by-product of an industry that
5 has a lot of variations in it. And it's shipped all over the world and used all over the world. But
6 because of the storage facility and only because of the storage facility, in the past 40 years,
7 the pricing of helium to consumers has been relatively constant. I don't mean constant, but I
8 mean it has not fluctuated.

9 You look at the price of oil in the last year. It went from \$10 a barrel up to \$35 a
10 barrel, and now it's down a little ways. The price of natural gas has gone up and down. The
11 price of heating oil in the Northeast has gone through the roof, and hopefully it will be back down
12 again by next summer. But that doesn't happen to helium consumers even though it is probably
13 the most difficult liquefied gas to ship around the world. And it potentially could have that same
14 kind of -- what would you call it -- up-and-down pricing. It doesn't. And the reason that it
15 doesn't is the impact of the storage system allowing excess to be put into storage and covering
16 deficits by taking out of storage. So that, essentially, the supply is always there to meet current
17 demands of customers all over the world.

18 And another interesting thing is that this storage facility is the storage facility. There is
19 no other. There's several other sources of helium scattered around the globe, some of them quite

1 large. But none of them possess this particular resource. And so it isn't just that this storage
2 facility balances the ups and downs of production from the Hugoton field. It balances the ups
3 and downs of production for the entire flow.

4 It balances the plant in Algeria. This summer it was cut back and produced only half of
5 its normal capacity for various and sundry reasons, concerning Algeria and the way that that plant
6 operates. All of that production that was normally going to Europe from Algeria and which was
7 cut off because half the plant wasn't producing was made up for by running the refineries
8 associated with the pipeline and storage field at a higher rate. And we shipped helium from the
9 United States to Europe to make up for the fact they didn't ship it from Algeria. In similar ways,
10 when production in various parts of the United States was cut back, then this part of the refining
11 capacity ran harder and made up for it.

12 The reason for talking about this is to emphasize a couple of things. One is that since
13 the mid 1970s when the private industry was allowed to participate in storing helium in the facility
14 and the present day, the United States government and the private industry have functioned
15 cooperatively. It's been a team effort. Wasn't designed to be a team effort, wasn't intended to
16 be a team effort, but it has developed to be a team effort, an effort that functions extremely well;
17 much better than anybody 40 years ago could have predicted when they said, "Okay.
18 Congress will pass this act and build this facility and store this helium, and you'll do weird and
19 wonderful things." Weird and wonderful things developed, and it developed from the fact that

1 the government was willing to cooperate with private industry, and private industry was willing to
2 seek out and cooperate with the United States government. We think that this is a very
3 important element to consider in making these regulations.

4 Now, I would like to speak to one of the points that was asked, and that is, how is the
5 pipeline and storage facility functioning in this regard? And I think that we have to say that in the
6 past 25 years it has functioned extremely well. Where problems have existed, they have been
7 addressed and they have been or are being solved.

8 And the other thing that I'd like to comment about is the COMMENT: Can the way
9 that privately-owned helium is stored and withdrawn from the storage system, can it be
10 improved? I'm sure that human beings can always improve upon almost anything. But that
11 system has functioned -- I hope that my little message up to this point has indicated that -- that
12 system as functioned extremely well. The effort, as I say, has worked out to being a closely run,
13 cooperative teamwork. And I haven't got any suggestions at all for improving the way that
14 private industry can make use of the storage system.

15 I'd like to make, I think, just one more comment about that. At the time that the
16 government asked us in the private sector, "How should we go about creating a system for you
17 to store your helium and pay for that storage privilege," one of the things that we emphasized to
18 them at that time -- this is 25 years ago. But we emphasized that what the private sector would
19 have a very difficult time in doing is paying for something before they had a use for it. But if the

1 payments could be made at the time that the helium was withdrawn from storage, the reason it
2 was withdrawn was that there was a market, an immediate market. You take it out, you process
3 it, carry it to the selling point, and you sell it all within a very short time period. And that gives
4 you the money, the income, for which you can then pay storage charges. And for 20 years the
5 system was designed in exactly that way. And a very, very minor and almost inconsequential
6 charge was made when helium was entered into the storage, and all of the rest of the charges
7 were due and payable when you took your helium back out of storage.

8 I think that in taking a look at the sale of helium from the government-owned storage
9 reserve, that's something that ought to be taken into consideration. The Congress has desired
10 that it be sold at a certain rate. But the market demands helium at its rate. And one of the things
11 that we certainly do not want to do is we don't want stored helium to be used in preference to
12 helium that is able to be extracted currently. The emphasis should always be to extract for use as
13 much as you can, and take out of storage only that portion that is necessary to balance with the
14 current demand.

15 And I think that's about all that I wanted to talk about, but I might have some
16 comments at one of your other meetings. Thanks. Thanks for listening.

17 MODERATOR: Anybody else?

18 COMMENT: Just a curiosity. Do you ever see us getting into the situation where the
19 government would prevent sales offshore?

1 MODERATOR: Do you ever see us getting in the position where we prevent sales
2 offshore, exporting it. Well, I think that comes under the guise of speculation which we're not
3 supposed -- which we're not supposed to be doing at this point.

4 COMMENT: But we do appreciate your comment anyway. We like to hear them
5 anyway.

6 MODERATOR: Yes, yes.

7 COMMENT: Do you think that's possible?

8 COMMENT: Do I think that's possible? Oh, sure.

9 MODERATOR: You think the government has the authority to do that?

10 COMMENT: I do. Maybe I'm wrong, but I do. I don't know if they do or not.

11 MODERATOR: Well, our stated intent was to be here until 8:30. If we don't have
12 any other questions or comments -- and we haven't had anybody come in late?

13 RESPONSE: Everyone that's basically been speaking has indicated that -- or anyone
14 that has come through that said they'd like to say anything -- I think a lot of them have made their
15 casual comments. But, again, anyone who's not willing to formally comment this evening, as
16 you'll note on your handout and also on the screen, again, there's several ways to get information
17 to us. If there's anything you can think of before we leave tonight, even if you don't have an
18 answer or a comment, you may have a question that may lead to a comment, we do appreciate
19 it; any area, maybe, that you haven't heard discussed by Tim so far tonight. If you're thirsty, we

1 have some water.

2 RESPONSE: Would they like a break and come back, or are we done?

3 MODERATOR: Well, we probably need to stay here until 8:30.

4 RESPONSE: Would they like a break and maybe think about if they want to say
5 anything and come back, or are we done?

6 COMMENT: Maybe a five or 10 minute break.

7 MODERATOR: Yeah. Let's take a 10 minute break and go to the bathroom or
8 whatever. And those of you that want to use this time to leave, you can, or if you want to come
9 back, and we'll do that.

10 (Off the record from 7:32 p.m. to 7:49 p.m.)

11 MODERATOR: I guess we'll go ahead and get back in session, if you will. I heard
12 everybody in various conversations, did it spark any comments or questions that you might have?

13 COMMENT: I wear two hats. I have a Kansas crude helium business and a
14 Wyoming refined helium business, both of which could be affected by this. Most of what I've
15 heard seems directed at the Kansas, Hugoton, midcontinent business and the long term contract
16 business that the BLM has with helium producers from federal land. If it is being addressed, I
17 don't see a lot to give us guidance as to what to give input on. Would you address that? Do you
18 understand my question?

19 MODERATOR: Yeah. Are the regulations that we will put together, are they going to

1 focus more on the smaller operators typically working in the Hugoton area as compared to those
2 that are more consolidated such as outside of that area?

3 COMMENT: Well, and that are under long-term contracts.

4 MODERATOR: Is that something that we can -- do we know that right now?

5 RESPONSE: What we do know is that what we want to do is enter agreements with
6 the extraction plants regardless of how large or small, but in standard guidance where we can.
7 But still understand and realize that there's economics involved, and that each plant has to be
8 looked at. Which that translates to we're not looking at a standardized contract, but agreements
9 with each plant. Does that answer your question?

10 COMMENT: Well, let me tell you what I understood from that. What I understood
11 from that is you're not planning to come out with regulations to address your long-term contracts.

12 RESPONSE: That exist --

13 COMMENT: That exist today. And that even new ones, that if there were
14 regulations, they would be broad enough to enable you to negotiate agreements that were
15 appropriate for the situation.

16 RESPONSE: We'll have to see. Because that's what we're looking at, where we
17 need to standardize, what we do need to do. And that's why we go back to the point to where
18 mainly what I can say is we're looking into entering into agreements with the extraction plants.
19 So that we're paid directly for the federal helium that's extracted.

1 MODERATOR: As an example, we do use standard contracts in our storage
2 operations and our in-kind sales operations. We do use standardized contracts. And part of it, I
3 guess, is because we can. But we recognize that in this situation where you're dealing with
4 different plants that have different capabilities, to come up with a standard contract, you might
5 lose more than you're really gaining, standardizing things. Does that make sense?

6 COMMENT: Is there anything you can offer to kind of help address the concern
7 you've got, or is that something you need to think a little bit about? Because you obviously have
8 a concern. If there's something you could throw out, even if it's just a thought, it would be really
9 helpful to the team.

10 The only reason I put it that way is because you made the comment were the
11 regulations going to be a certain way. And what we really want people to remember throughout
12 all these meetings is that the regulations will be built around a lot of the comments and hopefully
13 good comments that are going to be able to help be a good combination for the government side
14 and the industry side. So I don't want you to leave here thinking like you got an answer to your
15 thought when the thing we're asking for you is to turn that around as to what you would like it to
16 say that would help us address your concern. And then let the helium regs team be able to take
17 that thought and figure out a way to come up with the best answer. I really want to stress that.

18 COMMENT: Let me think about it and see you in Houston or in Wyoming. Thanks.

19 MODERATOR: Would it be useful at some point -- now might be as good a time as

1 any to go over what the next steps are in the process. Maybe, would you want to go over
2 what this process is going to be? We've started with the first listening session. We've got four
3 more scheduled. What's going to happen after the comment period closes and the next steps? It
4 may be useful to kind of go through that and let people know what they can expect is coming
5 down the road.

6 RESPONSE: That's probably a good idea. I'm thinking that since Jeanne is the team
7 lead, though, I don't -- she probably has her time line. I know what you expect of me, but I
8 don't know that what my --

9 RESPONSE: The formal comment period closes March the 26th. Hopefully, within a
10 short time frame after that, we'll be able to provide feedback from all the meetings on what
11 questions did we receive, what kind of comments did we get. They'll be provided for public
12 review. Also, after the closing of the comment period, we'll begin drafting the proposed regs
13 based on -- and taking into consideration the comments we received through these public
14 meetings and listening sessions.

15 Ever how long it takes that first draft to go through processes. It's a pretty lengthy
16 process because there are certain requirements built in. It takes about a year --

17 MODERATOR: Internally.

18 COMMENT: Internally. And it takes about a year to get those off the ground if
19 everything goes real well. So that comments will be put out there, or the proposed rule will be

1 put out there again for public comment. Then we'll go through that comment and review process
2 until it's a done deal and becomes a final rule.

3 MODERATOR: Would we have additional public sessions after the proposed rule?

4 RESPONSE: That could be.

5 RESPONSE: That's what I was going to ask after she finished that part. What I can
6 address is that dependent on how the comments come in, if it looks like there's a lot of, you
7 know, concerns, confusion. There's all different types of ways that we can further the comment,
8 either just put out notices, we'll take them by mail or e-mail, or we can set up more sessions like
9 this. It will kind of be dependent on how the team feels that input needs to be continued and if
10 there's a real concern still within the industry.

11 Hopefully, these sessions are going to be able to give people enough opportunity to feel
12 comfortable that you're given all the opportunities to where when you see that rough draft come
13 out, it will be just minor quickies that you can e-mail or whatever. But we'll do whatever it takes.
14 If it takes another round of meetings, that's definitely what will be set up. It's whatever the public
15 deems -- or basically what the team feels that the concerns still are.

16 And then, obviously, after a year, and they're working on it, and there still seems to be
17 a lot of areas that they're getting, you know, continued input from the public on, that's not
18 something you're probably going to want to throw out there without getting more fine-tuning. So
19 that the goal will be when it goes live, everybody will feel as comfortable as possible.

1 MODERATOR: And I would venture to say that if we don't have comments in an
2 area that we're putting regulations together on, we might put something together that when it
3 comes out in proposed form --

4 RESPONSE: We'll generate some.

5 MODERATOR: Yeah.

6 RESPONSE: Obviously, we won't be able to make everybody happy. But the goal is
7 that we definitely want to give the true, sincere word to the public that we're here to listen. Just
8 as, you know, the comment I was making earlier that if there is a question in your mind that
9 you're thinking, "Well, what would a regulation do to this or that," we ask you to turn that around
10 to how does that affect you either negatively or positively that you would like us to be aware of.

11 COMMENT: Could you further define that eight percent loss? I see it's from the
12 wellhead to the point of sale. Is that the point in which you transfer it to the refiners, or the point
13 at which the refiners sell it to the end users?

14 MODERATOR: The way I interpret that is you measure gas coming out of the
15 wellhead. And let's say it's a hundred MCF of helium. When you sell it, if you don't sell -- if
16 you sell less than 92 MCF, there's a problem.

17 COMMENT: So that includes your losses, the pipeline losses, and my losses.

18 MODERATOR: Well, from the wellhead -- that's what that said.

19 COMMENT: From the end user.

1 MODERATOR: Because we would presumably get our royalties based on how much
2 you sell. So what that's saying is there's eight MCF that was produced out of the minerals that
3 we didn't get any money for.

4 COMMENT: Right. Can you tell me right now how accurate the system is based on
5 your meter from coming out of the ground comparing it to all the meters that the refiners have
6 going into their plants?

7 MODERATOR: Now, we're not talking about helium that will be coming out of
8 storage. We're talking about you have an operator that's got a federal lease, and he's producing
9 natural gas from the field and has helium in there. And he's made a contract with the pipeline
10 operator to take that gas. And that pipeline operator takes it to the extraction plant, and the
11 extraction plant -- hopefully that Section 8 has been carried all the way through, and that
12 extraction plant takes out the helium. And then they maybe sell it, or it's refined up to a product
13 that's sold. It's that process there.

14 COMMENT: Okay.

15 MODERATOR: And you're --

16 COMMENT: You're talking strictly about the helium content.

17 MODERATOR: We're dealing with the helium.

18 COMMENT: So not so much at the dome --

19 MODERATOR: No, we're not talking about the dome, we're talking about the

1 helium.

2 Yes, sir?

3 COMMENT: If you decide you need to recover -- say they're not delivering that eight
4 percent, and you need to recover, do you go to the producer, the pipeline company, the
5 extraction?

6 MODERATOR: Well, that's a good question. That's a good question.

7 COMMENT: Got a good answer?

8 MODERATOR: Not today. But that is a potential problem. Because you've got
9 different people along the way. One should be able to -- if there's a linkage -- if the operator
10 knows they're producing, and they're selling it to a pipeline company. And then the pipeline
11 company is selling it to an extractor or however many -- if they know that that helium is coming
12 from this operator, being extracted to there, they should be able to know the custody transfer of
13 that gas. So they should be able to know where it's happening, where the loss is. But that
14 doesn't always happen.

15 COMMENT: Don't let me put words in your mouth, but I'm seeing myself with four
16 people between where I produce it and where it gets actually sold. And I can see each of them
17 saying, "Hey, I'm only -- got a seven percent loss. It's these other guys you need to go after."
18 You multiply those all together and boom. In most cases, I'm dealing under very long-term
19 contracts that I can't just go back and say, "You need to make that different now."

1 MODERATOR: That's a good point.

2 COMMENT: Would it make a difference to say that helium is allocated both for
3 production and revenues based on content at the metered wellhead? And it's all allocated back
4 to wellhead based on content at the metered wellhead.

5 COMMENT: It's allocated back, or do you go by the wellhead meter?

6 COMMENT: Well, the volume of gas at the wellhead and the helium content in that
7 gas at the wellhead.

8 COMMENT: Okay.

9 COMMENT: From the helium you had at that point?

10 RESPONSE: Both helium production and revenues, the allocation for those are based
11 on helium content at the metered wellhead. So it's the content and the metered volume of gas at
12 the wellhead. And that allocation is used for production, helium that's extracted and sold, as well
13 as the revenues received for the sale.

14 COMMENT: What you're saying is less some acceptable loss fee.

15 COMMENT: And what's an acceptable loss fee?

16 MODERATOR: Who said eight percent? What is an acceptable loss? I don't expect
17 you to have that off the top of your head.

18 COMMENT: I didn't realize that would be the number we were working with today,
19 so I have no concept of coming from the refinery into the pipeline, into the dome, out of the

1 dome, back to a user.

2 MODERATOR: But we're not talking about the dome and storage and all that. I think
3 what we need to differentiate, if it comes from a well, and it goes to an extractor, and he doesn't
4 ship it on to a refiner, but it goes into storage, well, there's a break right there. Or you can
5 consider us perfect where we take it and give you back -- and you probably could. Not that
6 we're great, but we take -- we put on a account, in effect, what you put in storage, and what you
7 store from us. And we deliver back what you put on account. We bear the loss. So, I mean,
8 you could just basically wash that all out because it's not a factor.

9 QUESITON: let me make sure I understand. Were you saying taking the actual sale
10 at the extraction plant and allocate it back to the wellhead based on --

11 RESPONSE: Based on content at the metered wellhead. That's why it's important to
12 know what is an acceptable processing loss from wellhead to point of sale.

13 COMMENT: All right. So let me just use some numbers just to make sure I
14 understand. Let's say -- I'm going to use simple numbers that we can all do in our head. Let's
15 say I produce a hundred thousand cubic feet of gas, and it's one percent helium. So on a
16 theoretical basis, I've now got one thousand cubic feet of helium. Okay.

17 My gatherer takes it, he gives it to a pipeline, it goes to my extractor. And my
18 extractor tells me I've got, you know, "Here is your helium. And it's 750 cubic feet." So what I
19 report to you is that what was allocated for that well is that 750, which means there's a 25

1 percent loss. And you say, "Hmmm. That's more than eight percent." And we say, "Is that
2 reasonable," and we look into the reason why. Is that what you're thinking?

3 COMMENT: And the answer may be that my gas goes to an old plant, and they can't
4 do any better than that.

5 RESPONSE: We'll be looking at justifiable losses. If you look at the wording, and it
6 says, "Eight percent before seeking compensation." That means we would like to see should we
7 look for more money, or are there justifiable reasons for the losses.

8 MODERATOR: So it becomes like a guideline, a set point or a trigger to -- for further
9 inquiry about the loss? It wouldn't be a hard-and-fast rule?

10 RESPONSE: Maybe it will. Should there be a standard?

11 COMMENT: Tim, could we have copies of your slides that you did?

12 MODERATOR: Yeah. I don't have copies.

13 COMMENT: Are they somewhere we can get them?

14 MODERATOR: Could we put this up on our Internet site?

15 RESPONSE: (Nods head up and down)

16 MODERATOR: We'll put it up there.

17 COMMENT: The other thing is, on that storage and transmission, it sounds like we
18 need to be looking at, from the comments in the room, not only to 2015, but storage and
19 transmission regs that could go beyond that.

1 MODERATOR: Well, the way the law reads, the Helium Privatization Act of 1996, it
2 says no later than 2005 you'll start to sell off the helium reserve over a 10 year period. You'll
3 offer for sale -- that was the -- you'll offer for sale one-tenth of the reserves starting no later than
4 2005 through 2015. It prescribes the minimum price also. And that's at a price that will be
5 designed by calculation to eliminate the helium debt, which we haven't talked about. And that
6 price is crude helium price that is roughly equivalent to the refined helium price.

7 COMMENT: So it may not be bought.

8 MODERATOR: That's right. It may not be bought. It's going to be the market that
9 can determine can the price that we are going to have to, by law, offer that, is it going to be
10 bought?

11 COMMENT: The other side of that, while the producers are still producing helium,
12 you could theoretically have more than your 30 MCF of helium in your dome because you may
13 be buying some and storing it. Correct?

14 MODERATOR: We won't be buying helium. The government's -- up until 1996,
15 there was still language in our authorization to buy helium. There is private helium being stored.
16 But that's different than the 30 billion cubic feet. In the field, there's not any difference. But we
17 have a little under 30 billion cubic feet of government-owned helium that was purchased during
18 the conservation program. And about 4.5 billion cubic feet that's stored under contract by
19 private companies.

1 COMMENT: So, theoretically, the 4.5 could go up.

2 MODERATOR: Could go up, could go down. In the last year, it's gone down pretty
3 steadily. But as Art mentioned, there's some reasons for that. Are they going to continue or not,
4 we'll see. But if it trends down the way it is, by 2005 there may be a market for it. It's hard to
5 tell. My crystal ball doesn't always work.

6 COMMENT: There will be a market for it at some point, it's just when.

7 MODERATOR: Yeah, there will be a market for it. And it may be that different
8 companies will be in that market at different times. It's not going to be like everybody's going to
9 be ready for it at the same time.

10 COMMENT: But you have to offer for sale from 2005 to 2015.

11 MODERATOR: No later than. And really, it's when these regulations are in place,
12 we could start offering it for sale at that time. So it could be 2003. If we've got a year for
13 internal churning of this stuff and another year to do the external churning of it. We figure two
14 years from now, 2003. You know, we might be able to start offering for sale by 2003. Could
15 be sooner, but I wouldn't bet on it. And it seems like a long time, and I guess it is.

16 COMMENT: You're saying you could start offering for sale up to 2005. You don't
17 have to wait until 2005.

18 MODERATOR: The way the legislation reads, you do not have to wait until 2005; no
19 later than 2005.

1 COMMENT: Exactly what will you sell?

2 MODERATOR: Crude helium in the ground is what we would sell.

3 COMMENT: Do you sell the structure, the facility?

4 MODERATOR: No, the helium.

5 COMMENT: The helium only, okay.

6 MODERATOR: In an account. Right now, it's -- you're buying -- the way our
7 in-kind sales work is you're buying helium in an account. And once it's paid for, we transfer the
8 helium purchased into your storage account which you can draw upon as you see fit. So it's
9 really a paper-book transaction. But you're paying for it up-front.

10 But the way that's working, though, you have private refiners are selling to federal
11 agencies and their contractors. They've made a sale. They sold real refined helium and gotten
12 the money for it. And then on a quarterly basis, they report to us how much refined sales they
13 made. The federal agencies and their contractors report to us how much they bought.

14 We match those up, bill the company, the private refiner, for that helium. Once we're
15 paid, we then transfer that amount of helium from the government 30 billion cubic feet over into
16 the private account, that four and-a-half billion. So their sales are being replaced MCF for MCF
17 with government-purchased, conserved crude helium in the ground.

18 COMMENT: And any money generated between now and then from whatever
19 source, they apply it against the helium debt which will lower the price.

1 MODERATOR: Well, kind of. There's still a helium fund out there. The helium debt,
2 which is about \$272 million of principal that was accrued from the 60s into 1973 -- and I might
3 add, about a third of that cost -- the actual helium cost was about 50 percent higher than that.
4 About a third of that cost was financed out of operations during that time.

5 Well, that \$272 million had interest applied to it, to where the total helium debt is a little
6 under \$1.4 billion. That's in the treasury, a paper debt against the helium program. Right now,
7 in the helium fund, we've got between \$30- and \$40 million. And that's due to generated funds
8 from the disposal of property no longer needed, to in-kind sales, to storage operations, to
9 whatever. That money goes in, we do our operations and take the money out. But over the last
10 several years, we've paid about \$10 million a year against that debt.

11 Once we start selling crude helium in earnest -- if we sold it at the rate that the
12 legislation envisions, about 2.5 billion cubic feet a year, that would generate an awful lot of cash
13 that would offset the cost of the debt. Now, the way we calculate the debt is, the debt -- or the
14 price of the helium is, the debt divided by the amount of helium in the reserve, adjusted by the
15 CPI from December 1935.

16 Well, that adjustment there, the inflation adjustment, raises that price of helium to where
17 you're paying back a lot more than just the straight unit cost. So the calculated minimum price
18 keeps going up until we start making big payments against it, until you start selling large volumes
19 of crude helium. And then with that CPI adjustment, it starts knocking down that minimum price

1 that we would have to charge to the point where, if it projected out the way the legislation says it
2 would go, the minimum price would be less than when we started out.

3 Now, what'll I'll say just a little bit more before crossing that line, I think, is that's
4 counterintuitive; that as you get further on, you're going to start selling it for less price. I mean,
5 that doesn't -- in my opinion, doesn't make sense. And maybe I shouldn't say that, but it's on the
6 record.

7 COMMENT: I think, all you have to say is it's a minimum price --

8 MODERATOR: It is a minimum price.

9 COMMENT: -- not a maximum price.

10 MODERATOR: That's what the legislation -- the minimum price calculated based on

11 --

12 COMMENT: So, in essence, what you're saying is the more money you can generate,
13 the more likely it's going to sell. Because the price will be cheaper, the minimum price.

14 MODERATOR: I don't think you can make an assessment that far out and say that
15 everything is going to fall into line to where that could happen. I mean, if everything goes
16 according to the legislation, then you could probably say that.

17 Anything else? I think it would be safe to adjourn. Thank you all for coming. And for
18 those of you that will go down to Houston, I'll see you in Houston or Portland or Denver or D.C.
19 I'll be at all of them. Thank you.

1 (Meeting adjourned at 8:17 p.m.)

2